Prevalence and incidence rates of AD use were calculated for each calendar year and stratified by class therapy and age group. Sub-analyses by cardiovascular co-medication therapy and pharmaceutical cost analysis were performed. **RESULTS:** Overall, the prevalence rate decreases from 22.0%-17.5% 2010-2014 (p<0.001). Proportion of subjects treated with monotherapy increases over the study period (33,9%-38,6% 2010-2014; p<0.001). In particular, increases the proportion of users of metformin (18,2%-23,7% 2010-2014; p<0.001), while the proportion of users of sulfonylureas dropped (11,0%-7,2% 2010-2014; p<0.001). Overall about 90% of elderly diabetic patients are treated with drugs for cardiovascular prevention. The largest increase during the study period occurred in subjects aged 65-74 years (54.8%-62.1% 2010-2014; p<0.001). On the other hand the trend was downward both in the 75-84 and in ≥85 age groups (37.3%-32.9% 2010-2014; 7.8%-5.0% 2010-2014 respectively). The per/patient/yearly drug costs was 2,349€: 28.5% for AD therapy and 71.5% for other treatments. **CONCLUSIONS:** The results confirm the negative trends observed in other population in the use of AD drugs among elderly diabetic patients. Specific trend in drug utilization patterns showed an increased attention towards treatment recommendations in older adults. Safety concerns in the elderly regarding polypharmacy such as presence of multimorbidity and hypoglycemic episodes could also have contributed to such a trend.

PDB16

CARDIOVASCULAR OUTCOMES OF ANTIDIABETIC THERAPY - RESULTS OF A LITERATURE SEARCH

Greiner R, Eheberg D, Paulus G, Batscheider A
IMS Health, Munich, Germany

OBJECTIVES: Diabetes mellitus type 2 (T2DM) is associated with an elevated risk of microvascular and macrovascular complications that are the leading cause of morbidity and mortality in this patient population. In 2008, the Food and Drug Administration (FDA) has provided guidance for industry on how to demonstrate that new antidiabetic drugs for T2DM are not associated with an unacceptable increase in cardiovascular risk. Since introduction of the AMNOG in Germany in the year 2011, the Federal Joint Committee has consistently demanded the analysis of cardiovascular outcomes for new antidiabetics. The objective of this study is to analyze the cardiovascular risk associated with antidiabetics by a literature search. **METHODS:** To identify long-term outcomes studies, a targeted literature research was conducted in PubMed in 2015, using the search terms Diabetes Mellitus, Type 2/ drug therapy/ epidemiology/ cardiovascular. Included studies were categorized regarding study design, patient-inclusion criteria, pre-existing illness, treatment duration, treatment modus and cardiovascular outcomes. PubMed research was supplemented by additional searches in guidelines in German/English language. **RESULTS:** 15 outcome studies were identified in T2DM: UKPDS, PROactive, STOP/NIDDM, ACCORD, ADVANCE, VADT, SAVOR-TIMI, EXAMINE, NAVIGATOR, RECORD, Look AHEAD, ORIGIN. Studies TECOS (sitagliptin) and ELIXA (lixisenatide) have reported results until mid of 2015 while data from EMPA-REG OUTCOMETM(empagliflozin) are expected in the second half of 2015. Combined or single cardiovascular outcomes were used as primary endpoints by 12 studies. None of the outcome studies in T2DM with cardiovascular condition that have reported results so far could demonstrate a significant risk reduction for macrovascular events in the primary endpoint. **CONCLUSIONS:** Cardiovascular outcome studies of new antidiabetics are important to analyse safety of therapies as well as long-term conditions and unmet need in T2DM. Especially the results of the ongoing studies are bound to fill the gap stressed by marketing-authorization and reimbursement agencies.

PDB17

FACTORS ASSOCIATED WITH T2DM TREATMENT CHOICE ACROSS EUROPE

Overbeek JA[1], Heintjes EM[1], Hall GC[2], Lapi F[3], Prieto Alhambra D[4], Bezemer ID[1]
[1]*PHARMO Institute for Drug Outcomes Research, Utrecht, The Netherlands,* [2]*Grimsdyke House, London, UK,* [3]*Health Search, Italian College of General Practitioners and Primary Care., Firenze, Italy,* [4]*IDIAP Jordi Gol, Barcelona, Spain*

OBJECTIVES: To explore demographic and clinical factors associated with choice of type 2 diabetes mellitus (T2DM) treatment at time of treatment intensifications. **METHODS:** For T2DM patients from the Netherlands (NL), Italy (IT), Spain (ES) (2007-2011) and United Kingdom (UK) (2008-2012) antidiabetic drug prescription records were obtained from electronic health-care record databases. Oral monotherapy was defined as first-line, oral dual therapy as second-line, >2 oral treatments or oral combined with an injectable as third-line and injectables only as fourth-line treatment. Treatment intensification was defined as starting a higher line of treatment. General characteristics, comedication, comorbidities and clinical parameters associated with choice of treatment were identified using multivariate logistic regression. **RESULTS:** From NL, IT, ES and UK 48,479, 67,751, 348,572 and 152,544 T2DM patients were included, respectively. For first-line treatment advanced age and renal comorbidity were associated with SU (all countries), whereas high BMI was inversely associated in UK and ES. For second-line treatment advanced age was associated with biguanide + SU (all countries) and renal comorbidity with SU + dipeptidyl peptidase-4 inhibitors (DPP4) in UK and NL. High BMI was associated with biguanide + thiazolidinedione (TZD) in UK and ES, and with biguanide + DPP4 (UK only). For third-line treatment advanced age and renal comorbidity were associated with SU + insulin in ES and UK, but high BMI was inversely associated with any third-line treatment containing insulin. For fourth-line treatment women were more likely to receive glucagon-like peptide-1 analogs than men in UK and ES. Calendar year and prior treatment played differing roles in treatment choices in different countries. **CONCLUSIONS:** Age, BMI and renal comorbidity were the predominant factors associated with T2DM treatment choice across treatment intensifications in four EU countries. Associations identified in this explorative study are intended to identify questions for further research.

PDB18

TRENDS IN PREVALENCE AND INCIDENCE RATES OF TYPE 2 DIABETES MELLITUS IN MEDICARE POPULATION

Xie L[1], Wang Y[1], Tan H[1], Ogbomo A[2], Baser O[3], Yuce H[4]
[1]*STATinMED Research, Ann Arbor, MI, USA,* [2]*The University of Michigan, Ann Arbor, MI, USA,* [3]*STATinMED Research, Columbia University, New York, NY, USA,* [4]*New York City College of Technology-CUNY / STATinMED Research, New York, NY, NY, USA*

OBJECTIVES: The current study examined the trends in the incidence and prevalence of type 2 diabetes mellitus (T2DM) in the Medicare population. **METHODS:** A prospective population-based study was performed from January 1, 2008 through December 31, 2013, to determine the prevalence and incidence of patients diagnosed with T2DM (International Classification of Disease, 9thRevision, Clinical Modification diagnosis codes 250.x0 and 250.x2) from the Medicare population. Patients with continuous enrollment in fee-for-service Medicare throughout the calendar year and at least 2 years prior, were included for study. The age- and gender-adjusted prevalence and incidence (overall and specified by age group and gender) of T2DM were calculated using direct standardization to the U.S. population aged 65 years or older in 2010, using gender-specific age groups. **RESULTS:** The annual adjusted overall prevalence of T2DM increased from 27.92% in 2008 to 32.00% in 2013, whereas the annual overall incidence rate decreased from 4.60% in 2008, to 2.79% in 2013. T2DM prevalence and incidence rates were higher among men compared to women, every year. Patients aged 80-84 had the highest prevalence rate in 2008 (30.40%) and 2011 (36.16%), whereas in 2012 (37.46%) and 2013 (38.57%), patients aged 85-89 had the highest prevalence rates. From 2008 to 2013, there was a steady growth in the prevalence rates among patients older than 75. In 2008, the highest T2DM incidence was observed in the Virgin Islands (9,885 per 100,000 person-years). In 2013, the highest incidence of T2DM was in New Jersey (6,143 per 100,000 person-years). **CONCLUSIONS:** From 2008 to 2013, T2DM prevalence increased and incidence decreased. Men were more likely to be diagnosed with T2DM compared to women.

PDB19

IMPACT OF SOCIOECONOMIC STATUS ON THE PREVALENCE OF COMPLICATIONS IN TYPE 2 DIABETES IN INDIAN POPULATION: A SYSTEMATIC REVIEW

Esam H, Mothe RK, Vsn M, Likhar N, Dang A
MarksMan Healthcare Solutions LLP (HEOR and RWE Consulting), Navi Mumbai, India

OBJECTIVES: India as said to be the diabetic capital of the world. This systematic review aims to determine the association between socioeconomic status (SES) and complications associated with Type 2 Diabetes Mellitus. **METHODS:** Literature search was conducted in databases such as PubMed, EMBASE and the Cochrane library without any restrictions. References of the included studies were screened for additional studies. We included observational studies focussing on association between SES and T2DM patients. The quality of the studies was assessed using the Newcastle-Ottawa scale. Two authors independently performed the study selection, data extraction and the quality assessment process. A third author reviewed the output and adjudicated discussions in case of disagreement. **RESULTS:** A total of 440 studies were retrieved by the databases search, of which only 4 studies were included in the final review. One study reported that T2DM population with SES groups were at high risk for developing visual impairment (odds ratio [OR] 2.91; 95% confidence interval [CI] 1.24-6.85). Similarly, another study showed high prevalence of diabetes peripheral neuropathy in lower SES (48.4%) group compared to upper SES group (10.2%). A positive association of cataract was observed in low SES group compared to higher SES group (OR 1.67; 95% CI 1.10-2.54; one study). In contrast to these findings, one study reported no significant differences between SES groups in the occurrence of any form of micro-vascular complications. **CONCLUSIONS:** The present review found very limited evidence regarding the association between socioeconomic status and diabetes complications. The available evidence suggest that diabetic peripheral neuropathy and eye related complications are high in low SES population, suggesting the need for educating patients with low SES to prevent long term complications in Indian T2DM patients. More observational studies are required to be conducted in the future in this context.

PDB20

THE ASSOCIATION OF WAIST CIRCUMFERENCE WITH GLYCAEMIC CONTROL IN DIABETIC PATIENTS IN AN ASIAN POPULATION

Azmi S[1], Feisul MI[2], Abdat A[1], Goh A[1], Abdul Aziz SH[1]
[1]*Azmi Burhani Consulting, Petaling Jaya, Malaysia,* [2]*Ministry of Health, Malaysia, Putrajaya, Malaysia*

OBJECTIVES: The aim of the study was to explore the association of waist circumference with glycaemic control in Malaysian patients with type 2 diabetes. **METHODS:** We utilised data of type 2 diabetes patients followed up in Malaysian public sector primary care clinics contained in the National Diabetes Registry in the year 2012. The variable of interest was poor glycaemic control, defined as HbA1c≥ 6.5%. Multiple logistic regression was used to explore the association between glycaemic control and waist circumference, which was adjusted for age, sex, duration of diabetes, systolic blood pressure, total cholesterol, use of insulin and other medications. **RESULTS:** A total of 98,825 patients with type 2 diabetes were included in the study. The mean age of patients was 59.9 years (SD: 10.9) and 38.9% were males. The mean duration of diabetes was 6.8 years (SD: 5.0) and 76.2% of patients had HbA1c ≥ 6.5%. The mean waist circumference was 94.0 cm (SD: 11.8) for male and 90.7 cm (SD: 11.8) for female; while 78.3% of the patients had waist circumference above the cut-off (≥ 90 cm for men and ≥ 80 cm for women). Larger waist circumference was found to be significantly associated with HbA1c≥ 6.5% (adj. OR 1.009; p<0.001; 95% CI: 1.007–1.011) after adjusting for confounding factors. **CONCLUSIONS:** Analysis showed that glycaemic control was poorer in patients with higher waist circumference than in patients with lower waist circumference.

PDB21

FACTORS ASSOCIATED WITH THE RISK OF DIABETES-RELATED EVENTS: A RETROSPECTIVE ANALYSIS

Mueller S[1], Wilke T[2], Groth A[1], Fuchs A[3], Seitz L[4], Kienhoefer J[4], Maywald U[5], Lundershausen R[6], Wehling M[7]
[1]*IPAM, Wismar, Germany,* [2]*Ingress Health, Wismar, Germany,* [3]*AOK PLUS, Dresden, Germany,* [4]*Novo Nordisk Pharma GmbH, Mainz, Germany,* [5]*AOK Plus, Dresden, Germany,* [6]*Diabetes*